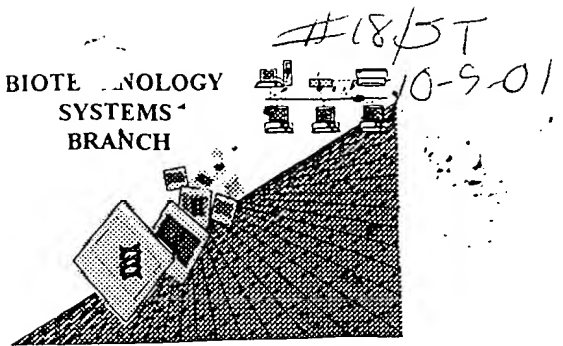1602

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _O 9/6 13, 591 C_

Source: _OIPE_

Date Processed by STIC: _08/15/2001_

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TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).
Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:
http://www.uspto.gov/web/offices/pac/checker

Raw Sequence Listing Error Summary

ERROR DETECTED   **SUGGESTED CORRECTION**   SERIAL NUMBER: _09/613,591 C_

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics   The number/text at the end of each line "wrapped" down to the next line. This may occur if your file
   Wrapped Aminos   was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will
   prevent "wrapping."

2 ____ Invalid Line Length   The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino   The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers;
   Numbering   use space characters, instead.

4 ____ Non-ASCII   The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please
   ensure your subsequent submission is saved in ASCII text.

5 ____ Variable Length   Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules,
   each n or Xaa can only represent a single residue. Please present the maximum number of each
   residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0   A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
   "bug"   sequences(s) _____. Normally, PatentIn would automatically generate this section from the
   previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to
   the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for
   Artificial or Unknown sequences.

7 ____ Skipped Sequences   Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
   (OLD RULES)   (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
   (i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
   (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
   This sequence is intentionally skipped

   Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 ____ Skipped Sequences   Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
   (NEW RULES)   <210> sequence id number
   <400> sequence id number
   000

9 ____ Use of n's or Xaa's   Use of n's and/or Xaa's have been detected in the Sequence Listing.
   (NEW RULES)   Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
   In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 ____ Invalid <213>   Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or
   Response   scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or
   is Artificial Sequence

11 __✓__ Use of <220>   Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
   Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or
   "Unknown." Please explain source of genetic material in <220> to <223> section.
   (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0   Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,
   "bug"   resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence
   listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

AMC – Biotechnology Systems Branch – 06/04/2001

OIPE

RAW SEQUENCE LISTING   DATE: 08/15/2001
PATENT APPLICATION: US/09/613,591C   TIME: 14:46:44

Input Set : A:\A-378CIP5.ST25.txt
Output Set: N:\CRF3\08152001\I613591C.raw

```
 3 <110> APPLICANT: BOYLE, WILLIAM J.
 4         LACEY, DAVID LEE
 5         CALZONE, FRANK J.
 6         CHANG, MING-SHI
 7         SENALDI, GIORGIO
 9 <120> TITLE OF INVENTION: COMBINATION THERAPY FOR CONDITIONS LEADING TO BONE LOSS
11 <130> FILE REFERENCE: A-378CIP5
13 <140> CURRENT APPLICATION NUMBER: US 09/613,591C
14 <141> CURRENT FILING DATE: 2000-07-10
16 <150> PRIOR APPLICATION NUMBER: US 09/457,647
17 <151> PRIOR FILING DATE: 1999-12-09
19 <150> PRIOR APPLICATION NUMBER: US 09/350,670
20 <151> PRIOR FILING DATE: 1999-07-09
22 <150> PRIOR APPLICATION NUMBER: US 08/706,945
23 <151> PRIOR FILING DATE: 1996-09-03
25 <150> PRIOR APPLICATION NUMBER: US 08/577,788
26 <151> PRIOR FILING DATE: 1995-12-22
28 <160> NUMBER OF SEQ ID NOS: 168
30 <170> SOFTWARE: PatentIn version 3.1
32 <210> SEQ ID NO: 1
33 <211> LENGTH: 36
34 <212> TYPE: DNA
35 <213> ORGANISM: Artificial Sequence
37 <220> FEATURE:
38 <223> OTHER INFORMATION: Not I restriction site
40 <220> FEATURE:
41 <221> NAME/KEY: misc_feature
42 <222> LOCATION: (28)..(35)
43 <223> OTHER INFORMATION: N = any random nucleic acid
46 <400> SEQUENCE: 1
W--> 47 aaaggaagga aaaaagcggc cgctacannn nnnnnt                    36
50 <210> SEQ ID NO: 2
51 <211> LENGTH: 16
52 <212> TYPE: DNA
53 <213> ORGANISM: Artificial Sequence
55 <220> FEATURE:
56 <223> OTHER INFORMATION: Not I restriction site
58 <400> SEQUENCE: 2
59 tcgacccacg cgtccg                                            16
62 <210> SEQ ID NO: 3
63 <211> LENGTH: 12
64 <212> TYPE: DNA
65 <213> ORGANISM: Artificial Sequence
67 <220> FEATURE:
68 <223> OTHER INFORMATION: Not I restriction site
70 <400> SEQUENCE: 3
71 gggtgcgcag gc                                                12
```

RAW SEQUENCE LISTING   DATE: 08/15/2001
PATENT APPLICATION: US/09/613,591C   TIME: 14:46:44

Input Set : A:\A-378CIP5.ST25.txt
Output Set: N:\CRF3\08152001\I613591C.raw

```
74  <210> SEQ ID NO: 4
75  <211> LENGTH: 18
76  <212> TYPE: DNA
77  <213> ORGANISM: Artificial Sequence
79  <220> FEATURE:
80  <223> OTHER INFORMATION: Not I restriction site
82  <400> SEQUENCE: 4
83  tgtaaaacga cggccagt                                        18
86  <210> SEQ ID NO: 5
87  <211> LENGTH: 18
88  <212> TYPE: DNA
89  <213> ORGANISM: Artificial Sequence
91  <220> FEATURE:
92  <223> OTHER INFORMATION: Not I restriction site
94  <400> SEQUENCE: 5
95  caggaaacag ctatgacc                                        18
98  <210> SEQ ID NO: 6
99  <211> LENGTH: 20
100 <212> TYPE: DNA
101 <213> ORGANISM: Artificial Sequence
103 <220> FEATURE:
104 <223> OTHER INFORMATION: Not I restriction site
106 <400> SEQUENCE: 6
107 caattaaccc tcactaaagg                                      20
110 <210> SEQ ID NO: 7
111 <211> LENGTH: 23
112 <212> TYPE: DNA
113 <213> ORGANISM: Rattus rattus
115 <400> SEQUENCE: 7
116 gcattatgac ccagaaaccg gac                                  23
119 <210> SEQ ID NO: 8
120 <211> LENGTH: 23
121 <212> TYPE: DNA
122 <213> ORGANISM: Rattus rattus
124 <400> SEQUENCE: 8
125 aggtagcgcc cttcctcaca ttc                                  23
128 <210> SEQ ID NO: 9
129 <211> LENGTH: 30
130 <212> TYPE: DNA
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Oligonucleotide primer
136 <400> SEQUENCE: 9
137 gactagtccc acaatgaaca agtggctgtg                           30
140 <210> SEQ ID NO: 10
141 <211> LENGTH: 45
142 <212> TYPE: DNA
143 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
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RAW SEQUENCE LISTING   DATE: 08/15/2001
PATENT APPLICATION: US/09/613,591C   TIME: 14:46:44

Input Set : A:\A-378CIP5.ST25.txt
Output Set: N:\CRF3\08152001\I613591C.raw

```
146 <223> OTHER INFORMATION: Oligonucleotide primer
148 <400> SEQUENCE: 10
149 ataagaatgc ggccgctaaa ctatgaaaca gcccagtgac cattc              45
152 <210> SEQ ID NO: 11
153 <211> LENGTH: 21
154 <212> TYPE: DNA
155 <213> ORGANISM: Artificial Sequence
157 <220> FEATURE:
158 <223> OTHER INFORMATION: Oligonucleotide primer
160 <400> SEQUENCE: 11
161 gcctctagaa agagctggga c                                        21
164 <210> SEQ ID NO: 12
165 <211> LENGTH: 21
166 <212> TYPE: DNA
167 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Oligonucleotide primer
172 <400> SEQUENCE: 12
173 cgccgtgttc catttatgag c                                        21
176 <210> SEQ ID NO: 13
177 <211> LENGTH: 24
178 <212> TYPE: DNA
179 <213> ORGANISM: Rattus rattus
181 <400> SEQUENCE: 13
182 atcaaaggca gggcatactt cctg                                     24
185 <210> SEQ ID NO: 14
186 <211> LENGTH: 24
187 <212> TYPE: DNA
188 <213> ORGANISM: Rattus rattus
190 <400> SEQUENCE: 14
191 gttgcactcc tgtttcacgg tctg                                     24
194 <210> SEQ ID NO: 15
195 <211> LENGTH: 24
196 <212> TYPE: DNA
197 <213> ORGANISM: Rattus rattus
199 <400> SEQUENCE: 15
200 caagacacct tgaagggcct gatg                                     24
203 <210> SEQ ID NO: 16
204 <211> LENGTH: 24
205 <212> TYPE: DNA
206 <213> ORGANISM: Rattus rattus
208 <400> SEQUENCE: 16
209 taactttac agaagagcat cagc                                      24
212 <210> SEQ ID NO: 17
213 <211> LENGTH: 33
214 <212> TYPE: DNA
215 <213> ORGANISM: Rattus rattus
217 <400> SEQUENCE: 17
218 agcgcggccg catgaacaag tggctgtgct gcg                           33
```

RAW SEQUENCE LISTING   DATE: 08/15/2001
PATENT APPLICATION: US/09/613,591C   TIME: 14:46:44

Input Set : A:\A-378CIP5.ST25.txt
Output Set: N:\CRF3\08152001\I613591C.raw

```
221 <210> SEQ ID NO: 18
222 <211> LENGTH: 31
223 <212> TYPE: DNA
224 <213> ORGANISM: Rattus rattus
226 <400> SEQUENCE: 18
227 agctctagag aaacagccca gtgaccattc c                               31
230 <210> SEQ ID NO: 19
231 <211> LENGTH: 24
232 <212> TYPE: DNA
233 <213> ORGANISM: Rattus rattus
235 <400> SEQUENCE: 19
236 gtgaagctgt gcaagaacct gatg                                       24
239 <210> SEQ ID NO: 20
240 <211> LENGTH: 24
241 <212> TYPE: DNA
242 <213> ORGANISM: Rattus rattus
244 <400> SEQUENCE: 20
245 atcaaaggca gggcatactt cctg                                       24
248 <210> SEQ ID NO: 21
249 <211> LENGTH: 24
250 <212> TYPE: DNA
251 <213> ORGANISM: Homo sapiens
253 <400> SEQUENCE: 21
254 cagatcctga agctgctcag tttg                                       24
257 <210> SEQ ID NO: 22
258 <211> LENGTH: 33
259 <212> TYPE: DNA
260 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 22
263 agcgcggccg cggggaccac aatgaacaag ttg                             33
266 <210> SEQ ID NO: 23
267 <211> LENGTH: 33
268 <212> TYPE: DNA
269 <213> ORGANISM: Homo sapiens
271 <400> SEQUENCE: 23
272 agctctagaa ttgtgaggaa acagctcaat ggc                             33
275 <210> SEQ ID NO: 24
276 <211> LENGTH: 39
277 <212> TYPE: DNA
278 <213> ORGANISM: Artificial Sequence
280 <220> FEATURE:
281 <223> OTHER INFORMATION: Not I restriction site
283 <400> SEQUENCE: 24
284 atagcggccg ctgagcccaa atcttgtgac aaaactcac                       39
287 <210> SEQ ID NO: 25
288 <211> LENGTH: 45
289 <212> TYPE: DNA
290 <213> ORGANISM: Artificial Sequence
292 <220> FEATURE:
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RAW SEQUENCE LISTING   DATE: 08/15/2001
PATENT APPLICATION: US/09/613,591C   TIME: 14:46:44

Input Set : A:\A-378CIP5.ST25.txt
Output Set: N:\CRF3\08152001\I613591C.raw

```
293 <223> OTHER INFORMATION: Not I restriction site
295 <400> SEQUENCE: 25
296 tctagagtcg acttatcatt tacccggaga cagggagagg ctctt                45
299 <210> SEQ ID NO: 26
300 <211> LENGTH: 38
301 <212> TYPE: DNA
302 <213> ORGANISM: Mus musculus
304 <400> SEQUENCE: 26
305 cctctgagct caagcttccg aggaccacaa tgaacaag                         38
308 <210> SEQ ID NO: 27
309 <211> LENGTH: 43
310 <212> TYPE: DNA
311 <213> ORGANISM: Mus musculus
313 <400> SEQUENCE: 27
314 cctctgcggc cgctaagcag cttattttca cggattgaac ctg                  43
317 <210> SEQ ID NO: 28
318 <211> LENGTH: 38
319 <212> TYPE: DNA
320 <213> ORGANISM: Mus musculus
322 <400> SEQUENCE: 28
323 cctctgagct caagcttccg aggaccacaa tgaacaag                         38
326 <210> SEQ ID NO: 29
327 <211> LENGTH: 24
328 <212> TYPE: DNA
329 <213> ORGANISM: Homo sapiens
331 <400> SEQUENCE: 29
332 tccgtaagaa acagcccagt gacc                                        24
335 <210> SEQ ID NO: 30
336 <211> LENGTH: 31
337 <212> TYPE: DNA
338 <213> ORGANISM: Mus musculus
340 <400> SEQUENCE: 30
341 cctctgcggc cgctgttgca tttcctttct g                               31
344 <210> SEQ ID NO: 31
345 <211> LENGTH: 19
346 <212> TYPE: PRT
347 <213> ORGANISM: Mus musculus
349 <400> SEQUENCE: 31
351 Glu Thr Leu Pro Pro Lys Tyr Leu His Tyr Asp Pro Glu Thr Gly His
352 1               5                   10                  15
355 Gln Leu Leu
359 <210> SEQ ID NO: 32
360 <211> LENGTH: 21
361 <212> TYPE: DNA
362 <213> ORGANISM: Mus musculus
364 <400> SEQUENCE: 32
365 tcccttgccc tgaccactct t                                          21
368 <210> SEQ ID NO: 33
369 <211> LENGTH: 34
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<210> SEQ ID NO 116
<211> LENGTH: 94
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: :
<400> SEQUENCE: 116

Description of Artificial Sequence is required in field 223.

```
ccggcggaca tttatcacac agcagctgat gactagtttc ttcatcataa tgaagatatt
60
ttggagcaaa agtttccata tgttattcct cctt
94
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/613,591C

DATE: 08/15/2001
TIME: 14:46:45

Input Set : **A:\A-378CIP5.ST25.txt**
Output Set: **N:\CRF3\08152001\I613591C.raw**

L:47 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:1461 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:116
L:1463 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:1463 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION: *Errored*